Operator's Manual

DIGITAL BABY SCALE

TSN **9806 DBS**

TSN TESENA

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NOTE : The product composition maybe different from this manual ,but it does not affect product function. Please understand

A. OPERATING PRECAUTIONS

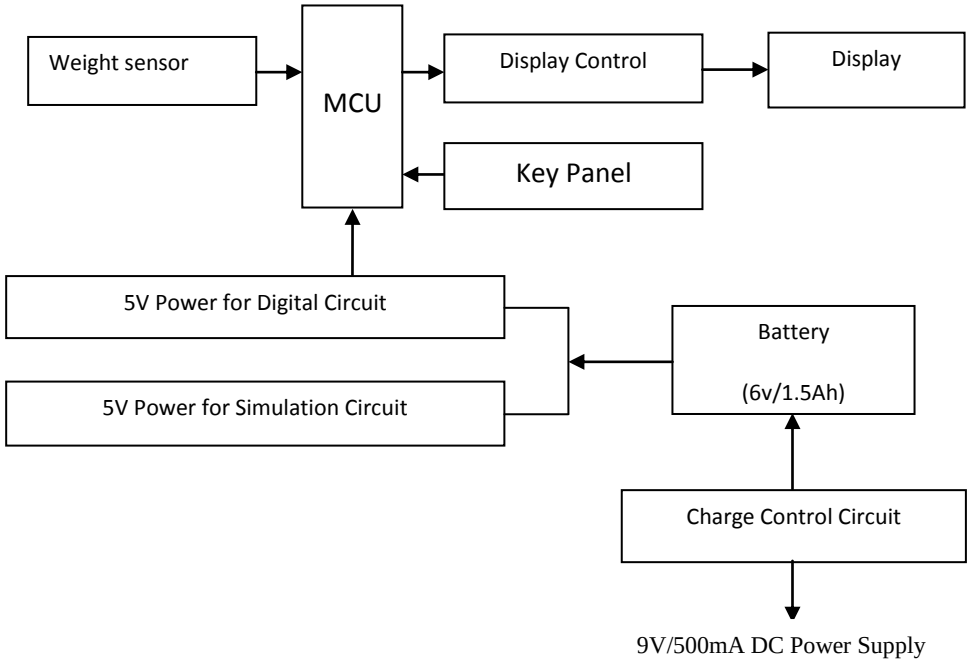
Please thoroughly read and understand the manual prior to use of the instrument, abide the follow operation precautions.

1. The infant bed that assembled the weighing scale should be placed into incubator and warm up at least 30 minutes. The incubator must be set and enter working status. Otherwise, the scale will not be exact.
2. The Infant must be placed in centre of the infant bed during weighing; otherwise, the scale will not be exact.
3. The infant must be placed horizontal during weighing; otherwise the scale will not be exact.
4. Make sure there is sufficient cable slack between the edge of the hood and the scale to permit the hood to be raised to its full open position and the matters tray to be fully with drawn from the hood.
5. Avoid forcing the tubes of transfusion and monitor, ensuring the validity of scale.
6. The battery must be charged full before use this instrument. The minimum weighing limit of the baby scale is 0.1 kg and the maximum is 8 kg. Do not overload to prevent from damaging it.

B. USAGE RANGE OF INSTRUMENT

This instrument weights avoirdupois of infant. It is only used in TSN 910 SC series Infant Incubator that produced by our company.

C. INSTRUMENT PRINCIPLE



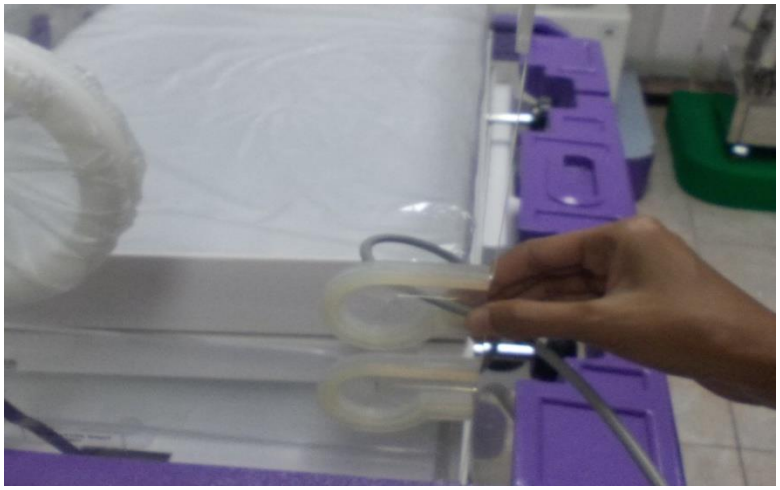
D. INSTALLATION OF INSTRUMENT

1. Rotate the left mattress tilt mechanism until its lowest position. Show as follow figure.

1. Open the front access panel and place the mattress tray assembling weigh sensor on the mattress tilt mechanism. Make sure that the mattress tray can freely slide and push.

2. Install Instrument: Fix the instrument on the 1 V pole infant incubators with clamp behind the instrument. Show as follow figure.

3. Connect the scale sensor cable to connector on the instrument through the left tubing access port on incubator.

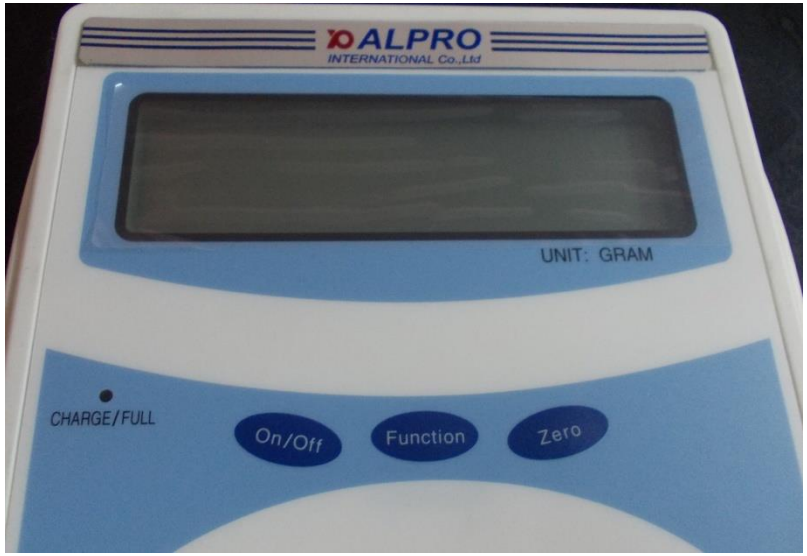


Note: The sensor connector that connected with the instrument could be pull out and hand during without use.

E. MAIN TECHNICAL SPECIFICATIONS

1. Power Requirements : 6V/1500mAh (Ni/H battery)
2. Operating Temperature Range : 0^0C -40^0C
3. Operating Humanity Range : 0%RH – 90%RH
4. Storage Temperature Range : -20^0C - +70^0C
5. Weight Display Range : 0 to 8 kg
6. Weight Display Resolution : 5 g
7. Weight Display Accuracy : ±10 g (digit up to 8 kg)
8. Low Voltage Alarm: When the battery voltage is lower than 5.6V “BTT-L” displayed on window with continually audible for 2 seconds, then the instrument will be automatically turn off.

F. OPERATIONAL PANEL AND FUNCTIONAL DESCRIPTION



1. [weight Display Windows] Two display modes could be selected.
   They are actual weight display and weight discrepancy display.

Actual weight display	: Display the infant weight.
Weight discrepancy display	: Display the infant weight that is relative to change data.
Over limit display	: "OVER" is display when the weight on surface is greater than 8kg.

2. [Charging Indicator] The indicator on the panel becomes orange colour that means the battery charging: green colour that means the battery full.

3. [ON/OFF key] press this key to open instrument. After the display is flash for three times, the instrument enters normal work status.
4. [Function Key] press this key to display the infant weight, to save the original weight and display discrepancy weight.
5. [Reset Key] Press this key to reset the weight display read all zeros after instrument is working for 5 seconds. But the infant must be lifting off mattress at first. (Note: the range of reset should not be over 15% of weighing limit, if not. "NO" will be displayed.)

G. OPERATIONAL PROCEDURE

1. Weighing Scale Calibration

   Upon installation and after maintenance the scale should be calibrated as following procedure:

   1) Press and hold Function Key and Zero for 2 Seconds at operational status, the instrument display "INCF", after 1 second, it will display current data.
   2) Press ON/OFF Key, "E SCAL" should be displayed. Remove any objects from the mattress.
   3) Press ON/OFF, "....." should be displayed. The initial weight that will be as zero point should read.
   4) "Add Ld" should be displayed about 5 seconds. Place calibrated weight 5 kg on mattress.

   5) Press ON/OFF key, "....." should be displayed after weighing stable, the scale is calibrating for 5kg sample. The instrument should display "End" about 5 seconds later, the calibration is over, remove weight and press ON/OFF key to return work status.

NOTE : Press Zero Key to exit during calibration but the primary parameter cannot be changed.

2. The operation of atomically shut down function.

   The scale has automatically shut down function .If any key do not be operated within starting operation 30 seconds, the instrument should automatically be shut down.

   This function can be selected. Press the function key during self checking (all LED light and flash 3 times), this function cannot be selected. But this operation is efficient only starting the instrument. Otherwise, this function will active next time.

3. Weighing Procedures

   a).Operation For Only Actual Weight.

   - Connect power supply.
   - Press the On/Off Key, the instrument enter normal work status after all LED light and flash 3 times.
   - Place the infant on the mattress, the weight of the infant will begin to appear in the weight display.

b). Operation for the rational display between the actual weight and dispersion.

- After the instrument enters normal work status, press the infant on the mattress, press an hold the Function Key (about 2 seconds) until "....." appeared in the weight of the infant will be saved.
- Turn off the instrument and turn on again, the current weight should be displayed after the instrument enters normal work status. At this time, press the function Key again, display the actual weight. The weight display will appear as such and such.

4. Charge
   The battery should be charged in time with charger, ensure the AC power is matching with charger.
   During charging, The indicator on The panel becomes orange colour, charging time is about 4.5 hours, the indicator changes to green colour when it full.
   The Instrument could operate during charging and do not worry any badly infection to the battery and instrument because of the charging is automatically controlled.

H. GENERAL TROUBLESHOOTING

1. The weight display is not appearing when power switch is on.
   - No power supply or the battery power level is very low.
   - The connector power switch is not good.

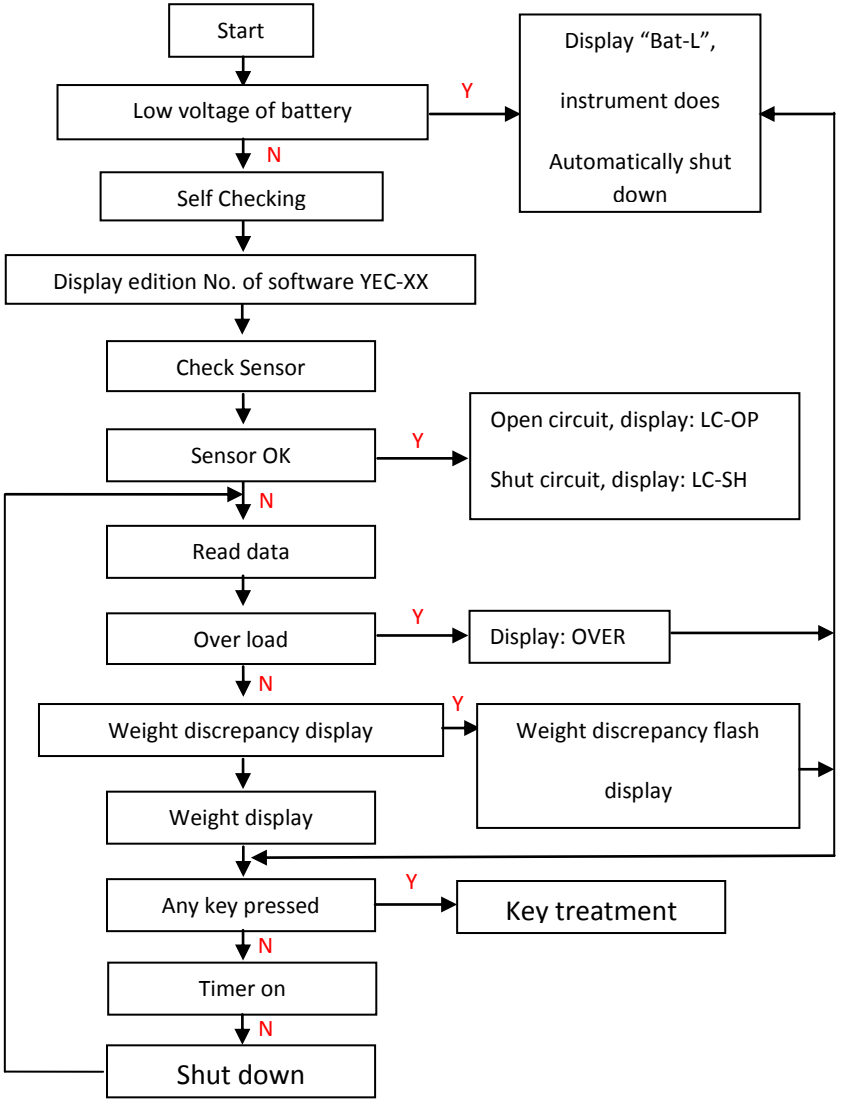
2. The indicator of battery charging does not light.
   - The charging light is broken. Open circuit in the charging circuit.

3. Low voltage alarm.
   - The alarm will active when the battery voltage is lower than 5.6 V

4. The indicator becomes green colour when the power turned on.
   - No battery in the instrument.
   - The battery damaged.

5. Weights do not exact.
   - The sensor does shut circuit or open circuit.
   - Infant does not place on the centre of the mattress.
   - The environmental temperature changed too fast
     .
6. If the user have problems or needs our help, please contact to dealer or our service department.

Flow chart programme:



I. CLEANING AND MAINTENANCE

The scale should be clean with be infant incubator, and checkout one p.a. in clean working condition.

1. Cleaning

   Remove the upper and lower mattress tray, to thoroughly clean all surfaces of lower mattress tray including weight sensor using detergent, then dry with a clean cloth. Do not dip in detergent/disinfectant.

   The method of clean the upper matters tray is same as cleaning the mattress tray of incubator

   Use a registered detergent to clean the surface of panel with a clean soft cloth, do not spray any industry solvent or scour onto its surface.
   At the same time, it should be care to prevent dusts and liquids during use.

2. Maintenance

   The battery should be taken out to prevent damage PCB from battery leaking if it does not use for long time.

J. PARTS LIST

1.	The mattress tray with weight sensor	1
2.	Instrument	1
3.	Battery charger	1
4.	Box Display Bracket	1
5.	User’s manual	1